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"IMPACTED LOWER THIRD MOLAR" AND THE GENERAL MEDICAL PRACTITIONER

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1 - JUL 193
MADRAS

Impacted Lower Third Molar is a very common occurrence which both the general Medical Practitioner and the Dental Surgeon meet with. "The wisdom tooth" as it is frequently called, or the third molar, erupts normally about between the 18th and 25th year. In some cases it deviates from its usual course due to the arrested development of the Mandible. The second molar in front and the Cornoid process behind bound the space allotted to the third molar; and when the physiological phenomenon in the process of development of the Mandible is arrested, the space allotted to the third molar will be insufficient for its normal presentation and hence the tooth is pressed forwards. It takes the direction of least resistance to its progress, and the manifesting condition is termed "Impaction". Another cause of impaction is, that the tooth is directed away from the normal course at a comparatively early period of development, due to changes in the cancellous bone immediately adjacent to the tooth owing to an inflammatory or some other pathological process, or trauma. The resulting secondary deposits in the dense bone, around the developing tooth arrest and deflect its normal course. Frequently the lower third molar erupts until it comes in contact with the second molar, then stops on account of insufficient space, in which case a small portion of the tooth alone is presented.

Clinical Signs and Symptoms—Local.—Infection of the soft tissue surrounding the Impacted wisdom, takes place caused by contusion of mastication and absorption of the bacteria-laden-saliva and food particles, into the interstice between the impacted wisdom, and the swollen tissue, resulting inflammation spreading to the para tonsillar region Deglutition becomes painful, trismus is set up; the person is not able to open his mouth more than two or three millimetres and the inflammation finally results in the

formation of an apical abscess. This is a typical clinical picture which a patient suffering from impacted wisdom and abscess presents to a general medical practitioner and the dental surgeon. This condition is likely to be mistaken for the infections of a paratonsillar region such as Pharangitis, Laryngitis, Superficial Glossitis, etc., which are invariably secondary infections caused by the impacted wisdom and abscess from which a definite tract of inflamed tissue can be very often traced to them. In short whatever other factors that might cause the above clinical picture, the general medical practitioner must give due preference to the existence of an impacted wisdom and abscess in his differential diagnosis.

Reflex Symptoms.—A pathological condition, which is the result of an impacted lower third molar, is a pressure resorption when the crown of the tooth is lodged or impacted against the root of the adjacent tooth, the hard enamel of the impacted tooth causes, a resorption of the tissues of the other to such an extent, that the pulp of the adjacent tooth is encroached upon and reflex Neuralgia is set up. Another condition is, the impacted third molar by pressure exerted upon the inferior dental nerve gives rise to a refered pain which is expressed in any part of the head that has its sensory nerve supply from the Trigemnial nerve. Neuralgia may have its etiology in such conditions. The late Dr. S. Upson, former Professor of Neuralogy in Western Reserve University ascribed many of the nervous disorders which "flesh is heir to" to the impacted tooth. Alopoecia Areata or baldness in sharply defined patches is a condition due to a nervous disturbance; for which an impacted tooth must be considered as an etiological factor. During the last few years we had in the Dental Department many of these "vague Neuralgias" clearing up remarkably with the removal of impacted teeth. Recently the Lunacy Board of Control, London, published a report of the improvement of mental cases after the extractions of the wisdom teeth.

Diagnosis.—With the clinical picture described above both local and reflex signs and symptoms and the presentation of a partially erupted lower third Molar or its complete absence; and with the aid of a good Skiagram successful diagnosis is made after eliminating all other causative factors.

Treatment.—Treatment lies in the question of the removal of the impacted wisdom. The removal of an impacted wisdom is indicated only when it gives local or reflex trouble.

Duty of the General Medical Practitioner.—The general medical practitioner should not under-estimate the difficulties of extraction of an

impacted lower third molar as it requires great manipulative skill and a definite technic and a thorough knowledge of the pathological possibilities and a scientific treatment for the post-operative condition. The first aid that he could give is to lance the inflamed gum covering the tooth and cauterize it with carbolic acid. Few hot fomentations and saline gargles may relieve the condition in early cases of inflammation and where there is not much of impaction. In a pretty advanced case of inflammation and deep impaction of the tooth with accompanying reflex symptoms the general medical practitioner should always seek recourse to a specialist or a good surgeon.

Technic for removal of Impacted Lower Third Molar.—Text books describe elaborately the operation of the removal of impacted wisdom with the chisel and mallet which is done in very deep cases of impaction under general anaesthesia. What we do in our Department is, after the field of operation has been sterilized and anaesthetised with a 2 per cent Novacaine solution an incision, 1 centimetre long is made through the soft tissues over the tooth. Then a vertical incision is made about 2 millimetres to the second molar and extended to a point half-way between the gingival margin and the root of the second molar. The triangular flap is raised exposing the osseous tissue surrounding the tooth. The next step is to remove with the sharp edge of the elevator with the hand pressure a section of the process overlying the tooth to an extent that there will be sufficient space between the second Molar and the osseous space covering the tooth to be displaced. Then drive the elevator with the hand-pressure into the interspace between the second and third molar and rotate the tooth backwards. Then with the aid of any other convenient forceps extract the dislodged impacted wisdom. There is very little haemorrhage in this operation and this is easily controlled by a gauze inserted on the buccal surface adjacent to the operative field. The most important thing to remember is that the impacted tooth is wedged into the jaw and the impaction has to be relieved before extraction. The more the inflammation is the easier for extraction. To have a clear view of the operative field a mouth-gag is always preferable.

Post-operative Treatment.—We have found in our department that cauterising the socket by carbolic acid together with hot fomentations and saline gargle with 5 per cent salt solution contributes to an uneventful recovery. In cases of post-operative pain A. P. C. powders or nervous sedatives like, Saridon, or Veramon tablets will be of immense use. I find that one intravenous injection of Collosal Iodine is 5 c c, as a routine in every case is followed by, preventing any untoward complications.

AROGYA YATHRA

Health Expedition—An Appeal For Constructive Programme.

The questions that face us to-day are of two kinds :—One is that which relates to aquisition of more knowledge ; the other is the organisation of the medical profession and the extension of facilities for service. I do not mean service under the Government. It is a very minor matter. I do not want you to attach any importance to Government Service. But we should be very particular, if the facilities that we traditionally possess for serving our people are restricted by the State in any manner. It is very unfortunate that even after the advent of the People's Government in the Provinces, we are not able to win the impartial support of the local Governments as against the foreign system of medicine. To me, the foreign system of medicine has been proved to be most unsuitable to the conditions of our country and our people. In the garb of science, it has become a trade-guild fleecing us of our valuable resources and in addition, most of the latest treatment in the shape of hypnotics, anti-pyretics, soothing agents, tonics and rejuvinators are not only a fraud upon innocent laymen but are also dangerous to health and long life.

We, the Vaidyas have, by want of State patronage, narrowed our activities to dispensing medicines, whereas our real duty is to educate the people not only to avoid disease but also to build up a robust body. Why is it, that, Sneha, Sweda Vyayama, Snana and other valuable aids to health, which were treated so extensively in Ayurvedic texts, are now omitted in actual practice.

Disease is unnatural. It is due to some irregularity in the habits of the individual or of the seasons. Leaving alone the seasons, which are not under our control, there is very much that a Vaidya can do in educating the people committed to his charge, so that they may avoid disease. It is not only diseases like Cholera, Typhoid and Leprosy, that may be prevented but many other diseases like Diabetes, Rheumatism, Piles and Consumption may also be prevented by educating the people to regulate their mode of food and habits. The present methods used by Western System of Preventive Medicine are some of them wrong and are unsuited to our conditions. A new orientation should be given to the methods that are now followed by the Public Health Department. Let us preserve, what we have and then go in for new methods whenever we need them. I have, after waiting for 18 months after the Congress Governments stepped into Office, and after finding that

our Government is moving in the wrong direction by ignoring the claims of Ayurveda in the field of Hygiene, started a Health Expedition called "Arogya Yathra". I have worked out the details of the Programme to be taken up by us immediately.

A national work of this kind can be carried out more successfully with the enthusiasm of the people than by any regulations of the State.

HEALTH EXPEDITION

The objects of the Health Expedition are:—

1. To develop the village Physician, to bring him up to-date and to organise Firka, Taluka and District Associations of the Vaidyas. We may admit, into these associations, members of other systems of medicine, if they agree to the fundamental principles of Ayurveda and sign our pledges to serve the Country.

(*a*) A list of the Vaidyas practising in the Villages should be prepared wherein, the age, the period of medical practice and the full address of each Vaidya should be stated.

(*b*) Primary Associations of Vaidyas should be organised either with the Village or a group of 4 or 5 villages or the Firka as a unit consisting of 20 Vaidyas. Non-Vaidya Members may be taken as supporters. The subscription for membership to Vaidyas shall be Re. 1-0-0 per annum. Donations may also be accepted from non-members for carrying out propaganda and in all cases triplicate receipts shall be given. Rules relating to the constitution of the Sabhas, will be supplied.

(*c*) Meetings of Vaidyas shall be held every month, where ideas should be exchanged and discussions should be held on professional subjects.

(*d*) An efficient gurukula system of training apprentices should be extended wherever possible and centres for Bhishak Examinations should be quickly multiplied so as to encourage the students to appear for these examinations, subject by subject, instead of at one sitting for all the eight subjects.

2. To revive Talimkhanas, Play Grounds and Public Health Gardens in each village:—

(*a*) A list of Talimkhanas, already existing in each village should be prepared. In places where there are no Talimkhanas, they should be established so as to suit the children of different ages, and different classes of people, men and women. Dandals, Baskies, Gada, Jodies may be taught. If

teachers are available, Asanas (Postures) and Lathi play may also be taught. People should be encouraged to take physical exercises in their own houses if circumstances permit. Places that are unfit for cultivation and that are dry may be acquired for utilisation as play-grounds. The place may easily be cleaned up by spreading some sand over it. All the indigenous games as such chedugudu and uppupatti and kokku may be revived. Swings, Sea-Saws etc. may also be provided for children. A compound wall shall be erected around the play-grounds intended for women.

(*b*) *Public Health Gardens*:—Even to-day we find in villages certain gardens being utilised as common Topes (public parks) where the village folk meet on festive days. These may be named as Arogya Ashramams. In selecting places for these Ashramams, two things have to be kept in mind *viz.*, (1) The places should be away from the bustle of the village and (2) they should be by the side of a hill, forest, a river or tank and be pleasing to the eye. The Ashramam should have pure and protected water supply from a reliable source. One or two cottages may also be built in one corner of the garden and suitable cases may be treated here by just taking advantage of isolation and open air life. The area of these may extend from one acre to 10 acres. Mental relaxation, Team spirit, and Body building should be secured by this method. If possible, any cottage industry which is adaptable to the aptitude of the inhabitants of the village may be encouraged on a small scale. A demonstration garden of the herbs which grow naturally in the neighbourhood and which are really valuable medicines should be established in a small area not exceeding 25 cents, in order to explain to the villagers the use of local herbs that grow abundantly in village parts. Wherever possible a Prasuti-Sala (Labour Room) may be attached for helping poor women of the village. These Ashramas may be worked on co-operative basis collecting a membership fee of Re. 0-2-0 per month and also donations from the rich.

3. To attend to the sanitation, disposal of the waste and to advise about the best water supply to each village :—

(*a*) Every villager should be made to realise that the street is his and that the village is his as he claims his house to be his own. He should also be responsible to keep his street and village clean just as he keeps his own house clean. We find that, even among educated women, some ladies take their children out into the streets to pollute them. They never like that the children should do the same pollution inside their own houses. The villagers should be persuaded to clean the street-fronts and sprinkle cow-dung water thickly and decorate the streets with floral designs instead of depending upon

the scavangers of the Panchayat, who usually clean the streets very late. The villagers should be persuaded to make manure out of the rubbish by dumping it in pits and covering the same with earth.

The next and most important thing is the supply of pure water fróm a protected source. It is very much lamented that our bathing Ghats even in Sacred rivers and tanks are polluted by unscrupulous men, who have no regard for decency. One flag must be posted on either side of the bathing-Ghat with the name Arogya Rakshaka Seva Sangham (National Health Volunteers Corps) and the area covered by the flags should be protected from all sorts of pollution. The Vaidyas and Volunteers should always be in attention to clean any pollution, by taking a bucket and mumpty in their own hands, if they are not otherwise able to stop this nuisance in these sacred bathing Ghats by their efforts. *It was no surprise to me when a pious Rani* of one of the famous Samsthanams found to her horror, human excreta floating on her back, when she had a plunge in one of the Thirthas attached to the Shrines of Balaji at Tirupathi. The ravages of Adharma cannot go further. I would attribute the perpetuation of some of these crimes to the so *called policy of religious neutrality followed by the British Administrators.* Now that the Congress is in power there can be no excuse for any in-action in these matters.

I have just now taken up, as part of my Health Expedition, renovation of the famous Pakshiteertham (Tirukalikundram) near Madras, so that it may regain its position as a Health Resort. The most important things to do are:

(1) To remove to the toddy-shop; (2) To keep the tanks well-protected and to use them only for baths; (3) *To fence all vacant sites so* as to prevent people from committing nuisance there; (4) To grow margosa and other trees so as to make the avenue round the hill more shady and attractive (5) To provide play grounds and talimkhanas and also a well equipped library, lecture hall, an Asramam and an Ayurvedic Dispensary. Above all the management of the Choultries should be brought under a combine so that their resources may be pooled and the visitors may be more comfortably served. An advisory committee consisting of interested people, members of the Panchayat and Devasthanam and also departmental officers of Government should be formed so that with the co-operation of the people and the authorities the present unhealthy village may be transformed into a picturesque Health Resort of modern type.

4. To develop a volunteer corps (Arogya Rakshaka Seva Dalam) for service in each village.

Much can be done in all the villages by a volunteer corps of young and enthusiastic men if they could be infused with patriotism and guided on right lines. Every small village may be made into a model Ashramam.

5. To create a patriotic wave in favour of robust Body-Building by revival of healthy Indian habits and customs and to take pledges from the people :—

(1) that they would study the Arogya Sutras and practise them in their daily life and

(2) that they would strive their best to build up a robust and healthy body even at the risk of giving up everything else.

(3) that they would encourage Ayurveda as much as possible.

A copy of the Arogya Sutras in the local language along with the pledge will be left at each house as their daily remembrancer.

6. To take pledges from the village Physicians stating,

(1) that they would treat their patients as their own children

(2) that they would as far as possible to treat poor people free in their own houses

(3) that they would preach the principles of health so as to prevent most of the diseases

(4) that they would avail themselves of every opportunity to improve their knowledge of Ayurveda and

(5) that they would foster unity among medical practitioners and would contribute to the strength of Ayurveda Maha Mandali.

I am glad to tell you that the Wardha Scheme of Education will include (1) Body Building by Vyayam (2) Prevention of disease by following the rules of health (Arogya Sutras) traditionally found useful in this country and (3) Knowledge of the common Indian Herbs found in the village parts, in the curricula of their studies. The Secretary assures me that these will have a prominent place. A syllabus is under preparation, so that care will hereafter be taken that the School boys will not be the puny creatures filled with useless Knowledge crammed from books. They will be proud and stalwart Indians, who will feel that they are trustees of a great civilisation, and will imbibe a spirit of patriotism and thirst for scientific knowledge, so that our country may once more occupy a place of honour in the Nations of the world.

The Indian Vaidya shall not lag behind in this swift march of time.

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NOTES ON PUBLIC HEALTH.

(Issued by the Principal Information Officer, Government of India)

Press Note.

A CAREER FOR EDUCATED WOMEN—MORE TRAINED HEALTH VISITORS NEEDED—EXISTING FACILITIES

'Where can we obtain trained health visitors' is a question which is being asked repeatedly by progressive Municipal Committees and District Boards. Educated Indian women are needed, in larger numbers than are at present coming forward for training, to meet this demand, which is the result of a growing appreciation of the importance to the nation of the health and well being of the mother and child.

One of the reasons for the present lack of sufficient applicants for health visitors' training may be ignorance of the openings for women which this profession offers. It is certain that the work should make a strong appeal to educated Indian women, because it provides an occupation which is full of human interest and of great social value.

The health visitor after training is employed by local authorities or voluntary organisations for work in connection with maternity and child welfare schemes. She is usually attached to a welfare centre. Her duties include the holding of clinics in the welfare centre and the visiting of women and children in the homes. The training of dais, the supervision of midwives and health propaganda of various kinds are other aspects of her work. A health visitor does not attempt to cure disease but she endeavours by friendly advice to educate parents as to how they may bring up their children to be strong and healthy.

By the very nature of her duties, the health visitor requires considerable independence of character, a sense of responsibility and a sympathetic understanding of human nature. She has abundant scope for the exercise of initiative and resource.

Schools for training health visitors have been instituted in Delhi, Bombay, Poona, Lahore, Calcutta, Madras and Nagpur, and the course of training varies from 9 months to 18 months.

Applicants for admission to the schools must be over 21 years of age and should possess a diploma in midwifery ; a general nursing training is an added advantage. The cost of training varies in different centres, but a considerable number of scholarships is available.

Health visitors possessing diplomas of the health schools can obtain posts on salaries starting at Rs. 70—75/- p. m. in Northern India and

Rs. 55—60/- p. m. in Southern India. A number of more highly paid posts are available for health visitors with experience and special ability, and women taking up this profession need have no fear of being unable to earn a good living.

Needed for Hundred Million Sufferers—A Seven-Year Scheme—I. C. A. R. Investigation Report.

"India contains enough first class land for an early resumption of cinchona growing", observes Mr. A Wilson, Deputy Director of Agriculture, Cinchona, Madras in the Imperial Council of Agricultural Research "Miscellaneous Bulletin No. 29".

India produces only 70,000 lbs. of quinine but consumes 210,000 lbs. and therefore import 140,000 lbs. mainly from Java. India's real need of quinine, however, has been estimated at 600,000 lbs. hence the importance of extending cinchona cultivation in India.

The Royal Commission on Agriculture emphasised the importance of cheap quinine. On the advice of the Indian Research Fund Association, the Central Advisory Board of Health in July, 1937 resolved that an officer experienced in cinchona cultivation should investigate areas most suited to its cultivation and the cost of production. The Imperial Council of Agricultural Research arranged and financed this investigation.

A Vicerine Cured

Cinchona is indigenous to the wilds of Andes in South America. It was named after the wife of a Spanish Viceroy of Peru, the Countess of Cinchon, the classic patient who was cured of an attack of fever about 1639 by the Cinchona tree bark employed as a decoction. In 1820 French chemists isolated quinine as the main alkaloid of cinchona bark.

Tracing the history of cinchona cultivation in India starting from 1835, Mr. Wilson mentions that within a short period of thirty years, the plantation industry had been abandoned by private enterprise by 1890, following overproduction and a catastrophic drop in prices. All that remained in India were the Cinchona Plantation belonging to the Governments of Madras and Bengal. These were the pioneers in the work of establishing the plant in India from seed obtained from South America. They continue to exist besides plantations of private growers who supply the Government quinine factories with cinchona bark. Simultaneously Java by unremitting scientific work, aided by *optimum conditions* for growing cinchona gradually obtained

a complete command of the world's quinine market which it now dominates to the extent of about 97 per cent.

COMMERCIAL POTENTIALITIES

The two most important species utilized by cinchona plantations in India are known as *Cinchona Ledgeriana* which predominates in Bengal, and *Cinchona Succirubra*, the red bark variety. The latter presents certain advantages for certain soils and elevations but the former, the principal variety in Bengal, has much greater commercial potentialities especially on account of its high content of the invaluable alkaloid. It is on this variety that Mr. Wilson recommends that future attention should be concentrated.

In cinchona growing, elevation aspect and soil are also of primary importance. Most important is the definite finding that cinchona is a comparatively delicate crop and one requiring good plantation management comparable with orchard cultivation. No slipshod methods will serve. If cinchona is to succeed, there must be properly organised nurseries putting out healthy seedlings which will grow into vigorous trees. Given a proper organisation of nurseries and a steady offtake of bark at guaranteed prices, the cinchona plant would not be unsuitable for small growers but any idea that it could profitably be grown as a forest tree can be dismissed.

The investigation included a survey of likely areas and a study of the cinchona soils, including potential cinchona soils, formed an important part of the investigation. The bulletin states in what areas efforts to extend cinchona cultivation are most likely to be successful.

COST OF PRODUCTION.

The report contains estimates of the cost of production of cinchona bark and consequent prices of medicinal preparations from it, of converting bark into quinine and into the mixed alkaloids, a cheaper preparation, commonly called totaquina. Details are given of a seven-year planting scheme which would bring Indian production up to the present level of consumption. While no great reduction in the cost of quinine is foreshadowed, the figures show that in suitable areas quinine could be produced in India at world market prices.

Mr. Wilson emphasises the need for research and experiments in a number of directions. Any area selected for development should be tested in the first place by small properly organised experiments to determine the yields of bark, the difficulties to be overcome and the cost of production. The need for more fundamental research is also emphasized. Amongst the

stock of cinchona plants at present existing in the country there are undoubtedly strains of superior plantation performance and containing a much higher percentage of quinine than the commercial mixed crop. By suitable *methods these could be isolated* and multiplied. Further experimental work is also required on the improvement of cultivation methods and in the reduction of the cost of extraction and distribution of the quinine.

Hundred Million Sufferers!

There are one hundred million sufferers from malaria in India calling for an annual supply of some 600,000 lbs. of quinine sulphate—or its equivalent in other forms. Immediately 38,000 acres of first class cinchona land is available, and this is distributed in Bengal, Assam, Orissa, Bhutan, Sikkim, Madras, Travancore, Cochin, Mysore and Coorg. Much of the hill land which is not yet fully explored showed promise and will require further investigation in the future.

Mineral Springs in India—Geological Investigation Contemplated Need of Medical Collaboration.

Occurrence of two sulphurous springs in Riasi district, Kashmir, are reported by the Geological Survey of India.

The one, which is situated about a quarter of a mile above Khar along the Tawi river, discharges hot water only during winter. It precipitates a good deal of milk of sulphur.

The other spring is, of course, the well known thermal spring at Tattapani. Its water is *apparently possessed of certain therapeutic properties* for curing skin diseases and gouty affections. This spring is visited by a large number of people from far and near. The water gives a strong sulphurous odour and maintains a constant high temperature of 70° to 80° C.

The name Tattapani is familiar in various parts of India—as in the Sutlej valley north of Simla, in the coalfield of this name on the northern border of Sirgula, in the Kopili valley in Assam etc.—at places where thermal mineral springs occur. There are, however, numerous other localities, many well-known places of pilgrimage, where hot springs are among the chief attractions because the waters have been found efficacious in the treatment of disease.

Catalogue of Hot Springs.

Several years ago the Geological Survey of India compiled a catalogue of the hot springs in this country, but this information is in need of addi-

tional information both with regard to the radio-active and mineral character of the waters from a geological aspect and the medicinal properties of the water from a medical point of view.

Just before the Italian occupation of Abyssinia an officer of the Geological Survey of India made a special investigation of several hot springs in that country on behalf of the Emperor of Ethiopia who then contemplated establishing a health resort in his territory. The special apparatus for ascertaining the radio-active property of spring waters in the field employed in Abyssinia is now in the possession of the Geological Survey. This deparment has, besides, even more delicate laboratory apparatus for the same kind of work and at least three officers who are already familiar with this class of investigation.

It is understood that an exhaustive examination of the mineral springs of India is under consideration and it is hoped that the Geological Survey of India will shortly be able to arrange a programme. But the determination of the physical and chemical constitution of the mineral waters must be supplemented by an investigation of the cures which are said to have been effected by the various waters and for this purpose medical collaboration is necessary to complete the investigation to give the final report its greatest value.

Though mineral springs have till now attracted little public attention in India, spas and hydros in Europe which have grown up at numerous places where mineral springs occur and the therapeutic properties of the waters are beyond dispute are highly popular resorts with those who seek health and holiday.

Should Pilgrims be compulsorily inoculated ? The Cholera Danger in India—Melas and the spread of Cholera—Committee to investigate the problem.

Since every large gathering of pilgrims appears to hold out a threat of the spread of cholera, the Central Advisory Board of Health at its meeting in Madras last January decided that the time had come to consider whether the authorities responsible for the health of the people should be armed with powers to enforce preventive inoculation. In order to investigate the question the Board appointed a committee consisting of the Hon'ble Dr. T. S. S. Rajan, Minister in charge of the Public Health Department, Madras, the Hon'ble Dr. M. D. D. Gilder, Minister in charge of Health, Bombay, the Public Health Commissioner with the Government of India and the Directors of Public Health of the Punjab. Bengal and the United Provinces.

At Pandharpur, in Bombay Presidency, where an important festival attracting over a lakh and a half of pilgrims takes place at this time of the year, the Provincial Government has been able to carry out inoculations of the great majority of pilgrims in recent years. The Committee appointed by the Central Advisory Board of Health will meet at Pandharpur on June 26, in order to see for themselves the procedure adopted by the authorities there. The Committee will reassemble in Poona on June 28, in order to consider its report.

The important part played in the spread of Cholera by large gatherings of pilgrims at festival centres has long been recognised by public health authorities in this country. Provincial public health departments are now taking elaborate precaution in respect of such gatherings by special attention to the sanitation of the festival area, medical inspection of the pilgrims, arrangements for the segregation and treatment of persons suffering from infectious diseases and intensive propaganda for carrying out mass anticholera inoculation among intending pilgrims. However, the most efficient sanitation of the festival area will not suffice to ward off the danger of cholera outbreaks when large numbers of pilgrims may arrive from or pass through cholera-infected areas on their way to and from the place of festival.

The explosive outburst of cholera that followed the Hardwar festival in April, 1938, and produced a large increase in the incidence of the disease in a number of Provinces and States, brought prominently to public notice the necessity for the application of all available methods to ward off the danger. The value of inoculation with cholera vaccine in conferring protection against the disease is now generally recognised and it is true that, within recent years, the willingness of the people in this country to accept inoculation has undoubtedly grown. Education of the people through the propaganda carried out by Provincial health authorities and voluntary organisations has been largely responsible for this result and educative efforts must no doubt continue in order to provide a background of public opinion in support of this measure.

THERAPEUTIC NOTES

'BETAXIN'

Betaxin in the treatment of Leprosy.

Very promising results are being obtained with 'Betaxin' in many etiologically diverse forms of polyneuritic and polyneuralgic disorders. The neurotoxic and infective types appear to respond equally well. The usual dosage used by different workers was 1 mgrm. and the total amount administered over some 9 weeks was 45 mgrm. Of late, in the light of further experience, the single dose up to 10 mgrm. was reached by some while others state that the rapid cessation of pain and regression of the nerve swellings was most striking. Even advanced bilateral peroneus paralysis improved in a relatively short time so much that practically complete function could be restored.

In conclusion it should be stated that treatment with 'Betaxin' injections has proved of great service in leprous neuralgia occurring as an isolated symptom and in the course of a general reaction to the disease; the response is equally good in the usually intractable neurotic vaso-dilatory symptoms in the hands and feet, which as a rule are associated with severe pain and paresthesia. The action appears to be highly selective, since the treatment leaves both the general and the arthritic symptom of leprosy wholly unaffected.

Leprosy Review, X: *109, 39.*

TREATMENT AND PROPHYLAXIS.

The Malaria Commission of the League of Nations regards as its main task to help physicians to distinguish what is clearly proved from what is still doubtful. Moreover, where truth is not plainly revealed, the Commission endeavours to ascertain on its own account, by arranging experiments according to a specific programme, as it has recently done the true value of the procedures or measures advocated.

In this country, the wrong idea is widespread that the Malaria Commission recommends a special way of treatment or a special preparation to be used. The statement " The short Quinine Treatment as recommended in

the Malaria Commission " is frequently met with in newspaper articles. A study of the fourth report, however, reveals that no such "standard" method of treatment is recommended, as the Commission does not deem it advisable to do so. *It is stated in the beginning of the report:* "We do not think, however, that it is part of the Commission to instruct medical practitioners in "standard" methods of treating the disease". However the *advantages and disadvantages of* every method and of every drug now in use in the fight against malaria are described and much is added to the knowledge about the synthetic drugs 'Atebrin' and 'Plasmoquine' which are well-known in this country. The report ends by saying:

> "As regards the synthetic products, which have only been used in therapeutics for ten years, the Commission hopes that it has discharged the duty which devolved upon it by giving in this Fourth General Report an account of the present state of our knowledge regarding the possible use of 'atebrin' and 'plasmoquine' in the treatment and prophylaxis of malaria. In certain circumstances, as has been shown *above, these drugs—representing* a notable scientific advance—possess a very special value."

(*The Fourth General Report of the Malaria Commission*).